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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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09/858,190

05/15/2001

Raymond Clarke

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EXAMINER

WEINSTEIN, STEVEN L

ART UNIT

PAPER NUMBER

1782

MAIL DATE

DELIVERY MODE

04/23/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--|--|--|
| Office Action Summary | Application No. 09/858,190 | Applicant(s) CLARKE, RAYMOND | |
| | Examiner Steven L. Weinstein | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 11-15, and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) 1 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-15 and 21-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The Office response to applicants letter received 9/30/08, for reasons unknown, has been delayed. The Office regrets any inconvenience.

In response to the letter of 9/30/08, the examiner confirms that the Office action mailed 12/28/06 was inadvertently sent out incomplete, since new references had been added to the rejection which were not apparently added to the mailed action and not included on a PTO892 form. Accordingly, the Office action, mailed 12/28/06, is hereby withdrawn and a new non-final Office action is found below.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-15 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scolaro ('378) in view of Cummin et al ('333) or vice versa, both further in view of Badran ('542), Badran et al ('544), Anderson ('875), Antoon ('331) and De Moor ('293), for the reasons of record, further in view of newly added Veeraju et al (Modern Packaging, 1966, 40,#2), Rizvi (Proceedings of the Intl. Confer. On Controlled Atm. Packag., 10/29/84), Varriano-Marston et al (Produce Marketing Almanac, 1987), Irving (CSIRO, 1984), Marcellin (Revue Generale du Froid, 3/1974), Wade (J. of Experimental Botany, 10/74, vol. 25, no. 88, pp.955-964, cited on page 6 of applicants IDS of 5/3/2002), Wardlaw (Tropical Agriculture, 1940, vol. XVII, no. 6, p.103plus, cited

on page 6 of applicants IDS of 5/3/2002), Saguy (Refrigeration Science and Technology, 1973, p.149 plus), Urushizaki (Foods and Food Ingredients, Japan 1998), Leonard (Annals of Botany, 1947, vol. 11, no. 43), Mannapperuma (Proc. Atm. Res. Conf., 1989), Zagory et al (Food Technology, 9/1988), Emond et al (American Soc. Agricultural Engineers, 1991), Ballantyne et al (Intl. J. of Food Science and Technology (1988), and Hardenburg (HortScience (1971).

In regard to claim 11, Scolaro discloses a package comprising a sealed container containing bananas which have not ripened, and thus inherently have not reached "their climacteric" and a packaging atmosphere around the bananas, and wherein the CO₂ to O₂ ratio is at least 3, the ethylene permeability is at least three times the O₂ permeability and the atmosphere can be in the amount recited. It is not clear how the O₂ permeability of Scolaro relates to that of the claim since the units are entirely different. In any case, Cummin et al, Badran, Badran et al, Anderson, Antoon, De Moor, Veeraju et al, Rizvi, Varriano-Marston et al, Irving, Marcellin, Wade, Wardlaw, Saguy, Urushizaki, Leonard, Mannapperuma, Zagory et al, Emond et al, Ballantyne et al, and Hardenburg all disclose that it was notoriously conventional to manipulate permeabilities in accordance with the particular product, its weight, its respiration rates, the amount of product, packaging size, and temperature, to provide a reduced (relative to atmospheric) O₂ level and an increased (relative to atmospheric) CO₂ level to slow respiration of produce. The preponderance of the evidence teaches that it was well established in the art, whether it is bananas or any or produce, that one can manipulate all of the known variables including the particular produce, gas permeabilities of the

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packaging material, temperature, respiration rate, weight of product, etc, to provide atmospheres in the containers which are low in O₂ relative to ambient (i.e., any O₂ concentration less than 20%-except less than 1% due to the disadvantages of an anaerobic condition) and high in CO₂ relative to ambient (i.e., any CO₂ concentration greater than say 1%). Therefore, even if the references did not fairly suggest the recited range, which they do, the art taken as a whole would fairly teach one of ordinary skill in the art to carry out routine and obvious experimentation, and now analog modeling, as evidenced by Veeraju et al, Rizvi, Varriano-Marston et al, Irving, Marcellin, Mannapperuma et al, Zagory et al, and Emond et al, to achieve optimum results in produce storage. In regard to the term equilibrium atmosphere, the objective of the art taken as a whole is to provide an equilibrium atmosphere when one is attempting to extend the life of produce by slowing down respiration. It is also noted that Wade discloses low O₂ is any amount less than 21%, and that ethylene levels of 15% were employed; Wardlaw discloses a level of O₂ of 14.5%; Saguy et al discloses that RQ values do not rise appreciably until the O₂ level is higher than 17; Urushizaki discloses an O₂ content of 17%; Leonard discloses an O₂ content of 14%; Ballantyne et al discloses an O₂ content of 15%; and Hardenburg discloses not only that the weight of produce affects the atmosphere in a produce package, but that the equilibrium concentration of gases are also affected. To modify Scolaro, if necessary, and manipulate the permeability to achieve extended storage life without ripening, which is the objective of both Scolaro and Cummin et al, would therefore have been prima facie obvious. Stated somewhat differently, the particular equilibrium atmosphere gas

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concentration ranges, including oxygen and carbon dioxide ranges (as well as the temperature range) are seen to have been an obvious result effective variable and/or routine optimization, routinely and obviously determinable in view of the art taken as a whole. Similarly, Cummin et al also teaches packaging green bananas in a sealed container with ratios of permeabilities that appear to be in the recited range. It would appear that at least in a short time after packaging, Cummin et al would have had a gas concentration within the recited range. In any case, it would have been obvious to modify Cummin et al and employ an O₂ concentration within the recited range for its art recognized and applicant's intended function of slowing down respiration. In regard to the dependent claims, which recite a permeable control member, Anderson and Antoon and DeMoor all teach the conventionality of control members employed with produce packaging with DeMoor specifically teaching the particular control member, and to therefore modify the combination and provide a produce package with a permeable control member for its art recognized and applicants intended function is seen to have been obvious. The remainder of the claims are rejected for the reasons given above. In summary, the art taken as a whole fairly teaches one of ordinary skill in the art to derive through routine determinations, the permeability necessary to extend the life of produce, including bananas, as a function of the known variables that are a function of the required permeability needed to retain a certain modified atmosphere within a package to extend storage life. There is nothing magic or secretive in these manipulations. The art fully and clearly teach that by lowering O₂ levels and raising CO₂ levels, and maintaining the modified levels, in a produce package, under refrigerated temperatures,

which, in a transportable package, can be done by employing semi permeable packaging material, the produce will have extended life. The art clearly teaches that each type of produce and even the amount of the same produce and the size of the container, will necessitate different but routinely determinable permeabilities. It is noted that the data set forth in the specification is more indicative of optimization rather than an unexpected result.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven L. Weinstein whose telephone number is 571-272-1410. The examiner can normally be reached on Monday-Friday 7:00 A.M-3:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Steve Weinstein/
Primary Examiner, Art Unit 1794